

## THE COUNCIL FOR TOBACCO RESEARCH - U.S.A.

633 THIRD AVENUE  
NEW YORK, N. Y. 10017

## COMMITTEE

Dr. Reimann, Chm.  
Dr. Bing  
Dr. Cattell  
Dr. Sommers

## Application For Research Grant

Gr. #174

Activated: 2/1/58  
Renewed: Annually  
on 2/1 - 1959-'64  
Inclusive

Date: August 22, 1967

## 1. Name of Investigator(s): (include Title and Degrees)

Jack P. Strong, M. D. - Myra L. Richards, A. M.2. Institution &  
Address:

Louisiana State University, Baton Rouge, La.

## 3. Short Title of Project:

Relationship of Smoking and Other Environmental Factors to Atherosclerotic Lesions

## 4. Proposed Starting Date: February 1, 1968

## 5. Anticipated Duration of this Specific Study: 3 years

## 6. Brief Description of Objectives or Specific Aims:

With reference to studies already in progress and to others being considered in the Department of Pathology at the Louisiana State University Medical Center, we wish to request reinstatement of support for continuation of our present autopsy study of the relationship of smoking and other environmental factors to atherosclerotic lesions. Support toward this retrospective study of a cumulative sample of autopsied male deaths in New Orleans was provided by the Tobacco Industry Research Committee throughout the major developmental and testing phases beginning February 1, 1958, and on through the first 3 years of the definitive phase. The last grant year ended on January 31, 1966, with an extension to July 31, 1966, for the use of unexpended funds.

The purpose (and plan) of our study continues to be to investigate selected environmental factors, including lifetime history of cigarette usage, occupation and occupational physical activity (last 5 years), dietary practices, habitual level of salt intake, and educational level attained, in relation to various measurements of type and extent of atherosclerotic lesions in the aorta and coronary arteries.

## 7. Give a Brief Statement of your Working Hypothesis: For human males, holding age, race, and cause of death classification constant, amount of cigarette smoking is positively associated with atherosclerotic involvement of both the aorta and the coronary arteries.

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## 8. Details of Experimental Design and Procedures: (Attach Separate Pages)

The sample of cases to be investigated is comprised of white and Negro resident males, aged 20 through 64 years at death, who die in Orleans Parish and who are autopsied at the Charity Hospital of Louisiana at New Orleans or the laboratories of the Parish Coroner. Reliable visual and radiographic methods, previously developed in our laboratories in connection with the International Atherosclerosis Project, for quantitation of various aspects of lesion development are applied by the pathologists to the specimens which are dissected at autopsy by our technicians, processed for preservation, and stored for reevaluation. The specimens are blind-coded, and prior to the evaluation, the pathologists have no information pertaining to the identification of the subject or to the clinical or autopsy data.

The collection and preparation of the pathological data and that of the environmental data are two distinct and separate operations. Research associate interviewers, adequately trained and experienced in social work, obtain the data by interview of surviving family members or other close associates, and prepare the basic data for transfer to IBM punch cards by the Department of Biometry, LSUSM, where it is programmed for computer analysis. Prior to the analysis stage of the study, the interviewers have no knowledge of the artery findings. (see attached sheet for continuation)

## 9. Physical Facilities Available (Where Other than Administering Organization Indicate Geographical Location)

There is a large research team in the Department of Pathology engaged in long term research on atherosclerosis. The head of the department (principal investigator), co-investigator, and chief of the biophysics section are directly concerned with providing professional supervision, interviewing, (see attached sheet for continuation)

## 10. Additional Requirements:

NONE

## 11. Biographical sketches of all principal and professional personnel (append)

Jack P. Strong, M. D. - Myra L. Richards, A. M.

## 12. List of publications: (Five most recent as pertinent) (append)

See attached sheet.

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Recognizing that a sample of necropsied subjects is a selected group and therefore not representative of the living population, it is necessary that comparative study of the values derived by measurement be made within appropriate race-age groups, subdivided further according to major cause-of-death classification. In this connection, preliminary tabulations were made in late 1966 of the first 645 cases completed, and in Table I (attached) is presented the race-age distribution of the sample according to the classification of "basal", without evidence of Coronary Heart Disease (CHD), and "non-basal", with evidence of CHD.

The sample is 54% Negro and 46% white. It is of interest that 208 (60%) of the 347 Negro cases fall into the basal group, while the 298 white cases break about evenly between basal and non-basal, 51% and 49%, respectively. It follows that, since 45% of all Negro cases fall in the younger age groups (20 through 44 years), a large proportion of the Negro cases would be basal, --that is, free of evidence of CHD or disease thought to be related to CHD or to smoking (hypertension, stroke, diabetes, lung cancer, emphysema).

We are preparing for an interim analysis of the present total of 756 cases in which both the pathological and the environmental data have been transferred to punch cards. This interim sample represents approximately the half-way point in reaching our revised goal of a 1,500-case sample. (Revision of the original goal of 500 cases was necessary in order to amass a greater number and a more nearly equal distribution of the cases among the sub-groups, thereby permitting more meaningful analyses.)

Environmental histories have been obtained at interview of qualified family members or other close associates in another 200 cases. These cases now await coding and the visual and radiographic measurements of the lesions by the pathologists and by the staff of the Biophysics Section, Department of Pathology. Another 40-odd new cases were assigned for interview in April, and upon completion of these and others awaiting assignment, the total cumulated sample should exceed 1,000 cases by September first. This cumulation of cases will represent the obtainable environmental data on all white and Negro male necropsied deaths, beginning January 1, 1963, whose artery specimens were collected by our technicians at necropsy and who have met the criteria for the study sample as defined in our Standard Operating Protocol. (The autopsies of the 70 male cases of the pilot study, now included in the study sample, were performed between June 1, 1961, and May 31, 1962.)

At our present rate of completing the cases, the collection of the last 500 will require approximately 2 years, and the analysis of the data for the total 1500-case sample, one additional year.

Continuation to question 9, second page

or obtaining and evaluating anatomic material for this specific project. A medical research technologist and typist-clerk are engaged in the project and there is a position open for a social worker interviewer. Ample autopsy material from Charity Hospital of Louisiana at New Orleans and the Office of the Coroner, Orleans Parish, is available. The Department of Biometry LSU School of Medicine has supervised the development and testing of the methods of collecting information on smoking habits and is collaborating in analyzing the data.

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Relationship of Environmental Factors to Atherosclerosis

Table 1. Distribution of the Cumulated Sample of 645 Cases (N) for Preliminary Analysis, of the Basal Group of 360 Cases, and of the Non-Basal Group (the Remainder) of 285 Cases, by Race and by Age.

AGE	Number of Cases in Sample (N)	WHITE			NEGRO		
		All (white)	Basal Group*	Non-Basal** Group (the remainder)	All (Negro)	Basal Group*	Non-Basal** Group (the remainder)
20-24	38	14	13	1	24	21	3
25-34	89	29	27	2	60	52	8
35-44	122	51	31	20	71	47	24
45-54	191	93	43	50	98	46	52
55-64	205	111	38	73	94	42	52
TOTAL	645	298	152	146	347	208	139
		(46% of sample)	(51% of white)	(49% of white)	(54% of sample)	(60% of Negro)	(40% of Negro)

\* "Basal" = those subjects without evidence of CHD or disease related to CHD or to smoking

\*\* "Non-Basal" = those subjects with " " " " " " " " " " " "

October 3, 1966

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## 13. Budget: (1st year)

## A. Salaries (Personnel by names)

## Professional

Myra L. Richards, A. M.

% time

Amount

100

## Technical

Mariz Longoria, Typist-Clerk III

50

Junius Solomon, Medical Research Technologist.

50

Sub-Total

## B. Consumable Supplies (list by categories)

Computer time

500

Interview forms and supplies

1000

1,500

Sub-Total

## C. Other Expenses (itemize)

Travel to professional meetings;  
one trip to England (London School of  
Hygiene) for consultation on analyses  
and results (May not be utilized until  
following year).

500

1,000

Sub-Total

## D. Permanent Equipment (itemize)

## E. Overhead (15% of A+B+C)

2,675

17,841

Total

20,516

## Estimated Future Requirements:

	Salaries	Consumable Suppl.	Other Expenses	Permanent Equip.	Overhead	Total
Year 2	R	1,500	Travel 500	—	2,586	19,826
Year 3	R	1,500	Travel 500	—	2,646	20,283

It is understood that the applicant and institutional officers  
in applying for a grant have read and found acceptable  
the Council's "Statement of Policy Containing Conditions  
and Terms Under Which Project Grants Are Made."

Signature

Director of Project

Signature

Business Officer of the Institution

Telephone

Telephone

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# Other Sources of Financial Support

List financial support for research from all sources, including own institution, for this and/or related research projects.

Current

Title of Project	Source	Amount	Duration
Natural and Experimental Atherosclerosis	U. S. P. H. S.	\$260, 000	7 years
Organized Research Budget supporting Atherosclerosis research.	L. S. U. School of Medicine	30, 000	1 year

Pending

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CURRICULUM VITAE

Jack Perry Strong, M. D.

R  
Marital Status: R

Secondary Education: Phillips High School - 1941 - 1945, Birmingham, Alabama

College: B. S. University of Alabama, 1948

M. D. Louisiana State University School of Medicine, 1951

Honors:

Phi Beta Kappa - 1947

Alpha Omega Alpha - 1950

Phi Kappa Phi - 1967

Academic and Professional Appointments:

Internship (rotating), Jefferson Hillman Hospital, Birmingham,  
Alabama, 1951 - 1952

Assistant, Department of Pathology, Louisiana State University  
School of Medicine, 1952 - 1953

Medical Officer and Pathologist, U. S. A. F., 1953 - 1955

Consultant in Pathology, Southwest Foundation for Research and  
Education, 1954 - 1955

Instructor in Pathology, Louisiana State University School of  
Medicine, 1955 - 1957

Assistant Professor of Pathology, Louisiana State University  
School of Medicine, 1957 - 1960

Associate Professor of Pathology, Louisiana State University  
School of Medicine, 1960 - 1964

Assigned to Professor J. N. Morris, Social Medicine Research  
Unit of the Medical Research Council, London, England  
September 1962 - September 1963

Combined Course in Medical Statistics by Professors P. Armitage  
and D. D. Reid, London School of Hygiene and Tropical  
Medicine, January - April, 1963

Professor of Pathology, Louisiana State University School of  
Medicine, 1964 to date

Head, Department of Pathology, Louisiana State University  
School of Medicine, 1966 to date

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**Hospital Appointments:**

Assisting Visiting Pathologist, Charity Hospital of Louisiana  
at New Orleans, 1952 - 1953; 1955 - 1958

Visiting Pathologist, Charity Hospital of Louisiana at New  
Orleans, 1958 to 1966

Senior Visiting Pathologist and Pathologist-in-Chief, LSU  
Division, 1966 to date

**Consultant Appointments:**

Louisiana Heart Association Research Committee, 1960 to date  
Pathology A Study Section, United States Public Health Service,  
1965 to date  
World Health Organization Atherosclerosis Project, 1962-1963

**Fellowships:**

Senior Research Fellow, United States Public Health Service,  
1957 - 1962  
Research Career Development Award, United States Public  
Health Service, 1962-1964

**Professional Organizations:**

American Association of Pathologists and Bacteriologists;  
Assistant Secretary, 1959-1962  
American Society for Experimental Pathology  
International Academy of Pathology  
American Society of Clinical Pathologists; Councilor for  
Louisiana, 1966  
American Society for the Study of Arteriosclerosis  
Diplomate of American Board of Pathology - Pathologic  
Anatomy, 1957; Clinical Pathology, 1958  
College of American Pathologists

**Research Interests:**

Epidemiology, geographic pathology and pathogenesis of  
atherosclerosis; atherosclerosis in primates

**Current Grants:**

Natural and Experimental Atherosclerosis (HE-08974)  
Pathology Training (GM-01202)  
Frost Foundation

**Community Activities:**

President, Bissonet Elementary Parent Teachers Association, 1961  
Vice President, Jefferson Committee for Better Schools, 1964  
Member of Official Board, Munholland Methodist Church, 1965

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Curriculum VitaeMyra L. Richards

July 1967

Place of birth:Marital status:

REDACTED

REDACTED

REDACTED

Education

Secondary: Liberty High School

College:

Graduate: Tulane University:

{ School of Social Work* Specialty,	}	1930-1932...Certificate
Medical-Social		
{ Completion of the 2-year curriculum	}	1930-1932...A.M.degree
Graduate School.....		

Experience

Social Service Dept., - (see page 2 for positions 1932-1942  
Charity Hospital held in the Dept.)

La. State Univ. - Field Supervisor of 6 1933-1934  
School of Medicine senior medical students in  
"Social Aspects of Medicine"

Public Health Dept., - Medical-Social Worker.....1934-1935 (approx. 5 mos.)  
Night V-D Clinic

Social Service Dept., - Medical-Social Worker... 1955 (Sept.-Nov.)  
Charity Hospital part-time  
Eye clinics and wards.

Social Research, Inc. - Survey interviewer... 1957, 1958  
(of Chicago) part time  
N.O. Dir., Dr. Rob't. Stone, Tulane:  
(1) "alcoholic beverages"; (2)  
"attitudes toward the draft (parents  
of draft-age boys, prior to induction).

La. State University  
Medical Center - Research Assistant (Clinical)...  
Dept. of Pathology part-time... 1956-1958  
- Research Associate (Clinical)...  
part-time... 1958-1960  
- Associate (Research).....1960-1966  
- Instructor.....1966 to date

\*Graduate School:

Tuition Award (library).....(1 yr.)  
Emerg. Relief Admin...certification interviewer.....1931 (3 months)

Social Service Dept. - Medical-Social Worker.....1931-32 (half-day)  
Charity Hospital

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Social Service Dept., Charity Hospital, New Orleans, La., Positions Held:

- July, 1932 - Medical-Social Case Worker --all white clinics.
- Dec.1935- - Formulated operational policies and procedures for a  
 Oct.1937 - joint W.P.A. - Charity Hospital medical certification  
 (approx.) project, (staffed by WPA physician and registered nurse)  
 for screening applicants; served as liaison worker in  
 the Charity clinics for applicants who required further  
 examination and evaluation for work.
- July, 1936 - Medical-Social Case Worker -- 9 general and special white  
 clinics and wards.
- Oct., 1938 - Organized and supervised the Dept's. Intake Service;  
 supervised clerical staff of 15 and an N.Y.A. clerical  
 project.
- Jan., 1940 - Set up and supervised the first program of medical-  
 social services in Charity Hospital Admitting and  
 Accident Rooms.
- Feb., 1941 - Designed and supervised the hospital's first program of  
 establishing eligibility by standardized interview  
 procedure; trained the interviewers.
- Case Supervisor of 7 medical-social workers in clinics  
 and Admitting Room.
- June-Dec. - Director, Social Service Dept. (acting)---professional  
 1941 staff of 35 medical-social workers and clerical staff  
 of 16. (Unable to accept permanent appointment as husband  
 was to be commissioned in War II).
- Dec.1941- - Supervisor: Charity Hospital Admissions Unit interviewers  
 July 1942 and 7 medical-social workers in clinics and Adm. Dept.  
 (Resigned to join husband at air base --War II).
- Sept.-Nov., - (See preceding page).  
 1955

Professional Organizations

REDACTED

REDACTED

REDACTED

Publications

- Co-author - "Relationship Between Cigarette Smoking Habits and  
 Coronary Atherosclerosis in Autopsied Males."  
 Circulation, Suppl. No. III, October 1966,  
 Vol. XXXIV, No. 4, p. 31. Abstract.

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PUBLICATIONS

- Strong, J. P., and H. C. McGill, Jr. 1962. The natural history of coronary atherosclerosis. *Amer. J. Path.* 40(1):37-49
- Strong, J. P., and H. C. McGill, Jr. 1963. The natural history of aortic atherosclerosis: relationship to race, sex, and coronary lesions in New Orleans. *Exp. Molec. Path., Suppl.* 1:15-27.
- Strong, J. P., and D. A. Eggen. 1965. Atherosclerotic lesions, p. 57 to 72. In The Milbank Memorial Fund Quarterly, Comparability in international epidemiology. Milbank Memorial Fund, New York.
- Eggen, D. A., J. P. Strong, and H. C. McGill, Jr. 1965. Coronary Calcification: relationship to clinically significant coronary lesions and race, sex, and topographic distribution. *Circulation* 32:948-955.
- Strong, J. P., H. C. McGill, Jr., M. L. Richards, and D. A. Eggen. 1966. Relationship between cigarette smoking habits and coronary atherosclerosis in autopsied males. *Circulation* 34 (Suppl. 3):31. (Abstr.)

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